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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/825,004

04/15/2004

Yutaka Shimada

7217/71980

7254

530 7590 06/19/2007  
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EXAMINER

SCOTT JR, THOMAS E

ART UNIT

PAPER NUMBER

2629

MAIL DATE

DELIVERY MODE

06/19/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/825,004	Applicant(s) SHIMADA, YUTAKA	
	Examiner Thomas E. Scott Jr	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) 1 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                                  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____   |

## **DETAILED ACTION**

### ***Restriction***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claim 1, drawn to a light source, classified in class 362, subclass 611.
  - II. Claims 2-5, drawn to a display apparatus, classified in class 345, subclass 84.
2. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, invention I does not require the particular image display unit including monochromatic light generating means and image light generating means as recited in invention II.

The examiner has required restriction between subcombinations usable together. Where applicant elects a subcombination and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to

provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

3. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Dennis M. Smid – Registration No. 34,930 on 5/17/2007 a provisional election was made without traverse to prosecute the invention of Group 2, Claim 2. Affirmation of this election must be made by applicant in replying to this Office action. Claim 1 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

#### ***Priority***

5. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Information Disclosure Statement***

6. The Abstracts of the Foreign Patent Document references listed on the Information Disclosure Statement filed on April 15, 2004 have been considered by examiner; see attached PTO-1449.

***Claim Objections***

7. Claim 2 is objected to because of the following informalities:

- Claim 2 uses a semicolon instead of a colon after "comprising".

Appropriate correction is required.

***Specification***

8. Applicant is reminded of the proper language and format for an abstract of the disclosure.

- The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words.  
Appropriate correction is required.
- The Japanese Laid-open Patent Application No. Ho6-243845 reference cited on page 2, line 11 should be provided so it can be considered.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura (U.S. 4,848,879) in view of Abe (U.S. 5,535,230).

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As to claim 2, Nishimura discloses an image display apparatus (Fig. 47, 56, and 97)

comprising;

- a light source unit (light flux incidence means –320); and an image display unit (modulating device 100, imaging lens – 321, and screen – 322) where light projected from the light source unit enters as a light source to perform an image display, wherein said light source unit includes:
- a semiconductor laser (329 – see col. 43, lines 31-34), laser driving means (semiconductor laser driving circuit 638 for laser 630 see col. 69, lines 17-19) for driving said semiconductor laser to emit laser light, and a light emitting unit (modulating device – 100 and lens – 321) on which the laser light emitted from said semiconductor laser is incident; and said image display unit includes:
- monochromatic light generating means (diodes - 329a, 329b, and 329c with lenses 330a, 330b, and 330c – see col. 46, lines 32-45, plus color filters 366a, 366b, and 366c) for generating monochromatic light of a predetermined color (red, green, and blue) – (see col. 48, lines 45-51), and
- image light generating means (modulating device – 100 with lens – 321) for generating visually recognizable image light (onto light receiving medium/screen 322) from the monochromatic light generated by said monochromatic light generating means (see col. 46, lines 32-36 and 45-61).

Nishimura does not teach a gas that excites an emission of white light. Abe teaches a gas (Argon – col.4, line 27) that excites an emission of white light (L – col. 7, lines 10-20

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and Fig. 1(b)) in accordance with an irradiation of the laser light having a predetermined energy is sealed (vacuum glass tube - see col. 4, line 26) to irradiate said white light as a light source (see col. 4, lines 22-30). It would have been obvious to one skilled in the art to combine gas that excites an emission of white light taught by Abe to the image display apparatus taught by Nishimura because semiconductor laser with the gas of Abe would provide small power consumption and generate sufficient radiant power in extreme safety to obtain the optimum illumination light such as white light (see col. 2, lines 20-25 of Abe).

As to claim 3, Nishimura teaches said monochromatic light generating means comprises:

- a diffraction grating (693) which reflects and projects variable monochromatic light in accordance with an incidence angle of light (from the collimator lens – 692) - (see col. 74, lines 33-42 and lines 65-68 to col. 75, lines 1-5).

As to claim 4, Nishimura teaches said image light generating means comprises:

- a screen (144, 322 and 698); and lens means (143b, imaging lens – 321, and (cylindrical lens – 697)) that has a predetermined focal length (i.e. Fig. 104 - focal plane ensures parallel light flux to ensure required position on 698 versus defocused from required position R on 322 – see col. 75, lines 63-67) so that the light irradiated on said screen from said light source unit through said image light generating means has a predetermined spot size (see col. 27, lines 43-46 and {spot on/off} col. 72, lines 63 through col. 73, lines 1-3)

and is provided at a required position (required position - col. 75, lines 31-68  
versus defocused position - see col. 43, lines 60 through col. 44 line 1).

As to claim 5, Nishimura teaches said image light generating means further comprises:  
horizontal scanning means (617) for performing a horizontal scan with respect to the  
light irradiated on said screen; and vertical scanning means (618) for performing a  
vertical scan with respect to the light irradiated on said screen (525) – (see col. 67, lines  
27-44).

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to the applicant's disclosure.

- Gibeau et al. (U.S. 5,920,361) discloses a laser-array image system.
- Nishi (US. 2002/0191171 A1) discloses an exposure apparatus utilizing laser light.
- Hakamata (U.S. 2002/0038074 A1) discloses an endoscope system wit a laser light source.

### ***Inquiries***



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1. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thomas E. Scott, Jr. whose telephone number is (571) 270 1714. The examiner can normally be reached on Monday to Friday 7:30 AM – 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on (571) 272 – 7772. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-0065.

Information regarding the status of this application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217 – 9197 (toll free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, please call (800) 786-9199 (IN THE USA OR CANADA) or (571) 272 – 1000.

Thomas E. Scott, Jr.

Examiner

06 June 2007

  
CHANH D. NGUYEN  
SUPERVISORY PATENT EXAMINER